



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,737	02/24/2004	Shih-Ping Yeh	TOP 356	2466

23995 7590 08/09/2006

RABIN & Berdo, PC
1101 14TH STREET, NW
SUITE 500
WASHINGTON, DC 20005

EXAMINER

BUTLER, DENNIS

ART UNIT PAPER NUMBER

2115

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,737

Applicant(s)

YEH, SHIH-PING

Examiner

Dennis M. Butler

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8, 9 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 5, 7 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/9/04</u> (<u>1/20/06</u>). | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2115

1. This action is in response to the application filed on February 24, 2004. Claims 1-13 are pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 6 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yang et al., U. S. Patent 7,010,704.

Per claim 1:

A) Yang et al teach the following claimed items:

1. a mobile (notebook) computer comprising a desktop processor and a battery with figure 1, at column 1, lines 28-35 and at column 2, lines 1-33;
2. a current sensor coupled to the battery that outputs a change signal (warning signal) when the value of the current achieves a standard value (predetermined value) with current sensor 102, comparator 106 and/or embedded controller 116 of figure 1, with figure 4, at column 2, lines 47-52, at

column 3, lines 13-33 and at column 4, line 44 – column 5, line 2, the current sensor is inherently coupled to the notebook battery when the notebook is powered by the battery;

3. a clock generator coupled to the current sensor and the desktop type processor that outputs a clock signal to the processor based on the change signal (warning signal) so as to change the operational frequency of the processor and the current supplied by the battery with frequency generator 112 of figure 1, at column 2, lines 47-52, at column 3, lines 13-33, at column 4, lines 27-43 and at column 5, lines 42-54.

Per claim 6:

A) Yang et al teach the following claimed items:

1. a mobile (notebook) computer comprising a desktop processor and a battery with figure 1, at column 1, lines 28-35 and at column 2, lines 1-33;
2. providing a standard value with the predetermined value in element 402 of figure 4 and element 503 of figure 5, at column 2, lines 47-52, at column 3, lines 13-33 and at column 4, line 44 – column 5, line 2;
3. reducing the operational frequency of the desktop processor when a value of the current supplied by the battery is greater than the standard value (predetermined value) with figures 4 and 5, at column 2, lines 47-52, at column 3, lines 13-33, at column 4, lines 27-43 and at column 5, lines 42-54. The current is inherently supplied by the notebook battery when the notebook is powered by the battery.

Per claim 9:

Yang describes increasing the operational frequency of the processor when the current value is less than the standard value at column 3, lines 34-50 and at column 5, lines 3-16.

5. Claims 2, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al., U. S. Patent 7,010,704 in view of Lee et al., U. S. Patent Application Publication 2003/0204762.

Per claims 2, 8 and 11:

Yang teaches the claimed elements of claims 1, 6 and 9 as described in the above rejection. The claims differ from Yang in that Yang fails to explicitly teach including a transformation table that is used to adjust the operational frequency of the processor as claimed. However, Yang describes that the BIOS adjusts the operational frequency of the processor based on a percentage of the original operational frequency at column 5, lines 42-47. Therefore, Yang discloses the claimed invention except for explicitly reciting the use of a table in determining the adjustment of the operational frequency. Lee teaches that it is known to include a transformation table that is used to adjust the operational frequency of the processor at paragraphs 12 and 13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a transformation table that is used to adjust the operational frequency of the processor, as taught by Lee, in order to ensure that the proper frequency adjustment is made by using the predetermined adjustments of the table. One of

ordinary skill in the art would have been motivated to combine Yang and Lee because of Yang's suggestion that the BIOS adjusts the operational frequency of the processor based on a percentage of the original operational frequency at column 5, lines 42-47 and because of Lee's suggestion that the BIOS adjusts the operational frequency of the processor based on a percentage of the original operational frequency using a table. It would have been obvious for one of ordinary skill in the art to combine Yang and Lee because they are both directed to the problem of controlling the power consumption and temperature of a desktop processor that is used in a notebook computer.

6. Claims 3-4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al., U. S. Patent 7,010,704 in view of Chen et al., U. S. Patent Application Publication 2004/0078606.

Per claims 3-4, 12 and 13:

Yang teaches the claimed elements of claims 1, 6 and 9 as described in the above rejection. The claims differ from Yang in that Yang fails to explicitly teach changing the operational frequency of the chip set and memory based on the operational frequency of the processor as claimed. Chen teaches that it is known to change the operational frequency of the chip set and memory based on the operational frequency of the processor with clock generator 60 of figure 1 and at paragraphs 36 and 39. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the operational frequency of the chip set and memory based on the operational frequency of the processor, as

taught by Chen, in order to reduce the power consumption and temperature of the entire notebook computer including the area surrounding the processor thereby reducing the ambient temperature. One of ordinary skill in the art would have been motivated to combine Yang and Chen because of Yang's suggestion that the operational frequency of the processor is adjuster based on the current detected by the current sensor at column 2, lines 47-52 and because of Chen's suggestion that the operational frequency of the processor in adjusted based on the detected current status of the battery at paragraph 36. It would have been obvious for one of ordinary skill in the art to combine Yang and Chen because they are both directed to the problem of controlling the power consumption and temperature of a processor based on the current status of the battery powering the processor.

7. Claims 5, 7 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis M. Butler whose telephone number is 571-272-3663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2115

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Dennis M. Butler

Dennis M. Butler
Primary Examiner
Art Unit 2115